

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

- 1017** Impact of the Sequential IPV/OPV Schedule on Vaccination Coverage Levels — United States, 1997
- 1019** Fatal Car Trunk Entrapment Involving Children — United States, 1987–1998
- 1022** Forecasted State-Specific Estimates of Self-Reported Asthma Prevalence — United States, 1998
- 1025** Abortion Surveillance: Preliminary Analysis — United States, 1996

Impact of the Sequential IPV/OPV Schedule on Vaccination Coverage Levels — United States, 1997

In January 1997, the Advisory Committee on Immunization Practices (ACIP) recommended adoption of a sequential inactivated poliovirus vaccine (IPV)—oral poliovirus vaccine (OPV) vaccination schedule (1). The schedule of injections of IPV at 2 months and 4 months of age, followed by OPV at 12–18 months and again at 4–6 years was intended to minimize the risk for vaccine-associated paralytic poliomyelitis (VAPP) while maintaining population immunity to the potential introduction of wild-type poliovirus. To determine whether this change may result in reduced or delayed vaccination coverage because parents or physicians might be reluctant to administer multiple injections at a single visit (2), CDC investigated the impact of the change to a sequential IPV-OPV vaccination schedule at two large West coast health maintenance organizations (HMOs). This report summarizes the results of the investigation and indicates that changing to an initial two doses of IPV was not associated with decreases in vaccination coverage levels of routinely recommended vaccinations.

This study focused on children enrolled at Group Health Cooperative of Puget Sound (GHC), a Seattle-based HMO with approximately 530,000 members, and Kaiser Permanente of Northern California (KPNC), an Oakland-based HMO with approximately 2.8 million members. Both sites have automated vaccination tracking systems (3) that allow for assessment of vaccination coverage by region, clinic, and individual patient. Beginning in April 1997, GHC adopted the ACIP guidelines for the sequential IPV schedule as an option for physicians and families. Within KPNC, each of its 17 medical centers made a local decision about whether and when to adopt the IPV schedule. Children in the study were born during October 1, 1996–June 30, 1997; resided in King, Pierce, Thurston, and Kitsap counties, Washington, and all counties of the KPNC region; had been continuously enrolled during the first 12 months of life; and had received at least one polio vaccination (N=1745 GHC and 15,707 KPNC enrollees). Up-to-date status, defined as receipt of two polio vaccinations, three diphtheria and tetanus toxoids and pertussis/acellular pertussis (DTP/DTaP) vaccinations, and two *Haemophilus influenzae* type b and two hepatitis B vaccinations administered after age 3 weeks, was measured at age 12 months.

The percentage of GHC children who received their first polio vaccine as IPV increased from 18% during the fourth quarter of 1996, to 19% in the first, 34% in the second, and 82% in the third quarter of 1997. Among GHC clinics that had at least 20

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

IPV/OPV Vaccination Coverage — Continued

children in the evaluation, the percentage of children who received IPV during the third quarter of 1997 ranged from 81% to 98%. In comparison, at KPNC, the percentages by quarter were 10%, 15%, 24%, and 36%, respectively; among KPNC clinics that had at least 20 children in the evaluation, the percentage of children who received IPV during the fourth quarter ranged from 6% to 98%. Among GHC children who received IPV as their first polio vaccination, vaccination up-to-date status by age 12 months for routinely recommended vaccines was 82%, 83%, and 82% in the first three quarters following implementation, and among those receiving OPV, vaccination up-to-date status was 82%, 81%, and 79%, respectively. At KPNC, the quarterly up-to-date percentages were 90%, 89%, and 91% for children receiving IPV, and 92%, 90%, and 91% for children receiving OPV.

After adjusting for sex, trends over time, Medicaid status, and primary clinic, GHC children receiving IPV as their first polio vaccination were as likely to be up-to-date at age 12 months as children receiving OPV (risk ratio [RR]=1.1; 95% confidence interval [CI]=1.0–1.3). KPNC children receiving IPV as their first polio vaccination also were as likely as those receiving OPV to be up-to-date (RR=1.0; 95% CI=0.9–1.0). At GHC, children enrolled in Medicaid had lower coverage levels at age 12 months (71% up-to-date among Medicaid enrollees compared with 83% among nonenrollees); KPNC Medicaid enrollees and non-Medicaid enrollees had similar up-to-date status (90% compared with 91%, respectively). Among GHC Medicaid enrollees, vaccination with IPV was not significantly associated with a decreased up-to-date status (68% at age 12 months among IPV recipients compared with 73% at age 12 months among OPV recipients). At KPNC, Medicaid enrollees receiving IPV were as likely to be up-to-date as those receiving OPV (91% compared with 90%, respectively).

Reported by: RL Davis, LK Mell, A Zavitskovsky, RS Thompson, Immunization Studies Program, Center for Health Studies, Group Health Cooperative, Seattle, Washington. TA Lieu, Div of Research, AM Capra, C Quesenberry, SB Black, HR Shinefield, Kaiser Permanente of Northern California, Oakland, California. Child Vaccine Preventable Diseases Br, Epidemiology and Surveillance Div and Health Svcs Research and Evaluation Br, Immunization Svcs Div, National Immunization Program, CDC.

Editorial Note: The findings in this report indicate that use of IPV for the initial polio vaccine doses in these two West coast HMOs was not associated with decreases in vaccination coverage levels. These findings are consistent with evaluations conducted in other settings, including clinics serving children from low-income families (4–6).

An important ancillary finding from the study was that the sequential polio vaccination schedule was implemented to a much greater degree in the HMO that used a more centralized decision making process than in the HMO that relied on local decision making (82% compared with 36%, respectively, for the percentage of children who received IPV for their initial polio vaccination). In the United States, use of IPV increased from 6% of all polio vaccine doses distributed in 1996 to 29% in 1997 (CDC, unpublished data, 1998).

Despite the increased use of IPV, four cases of VAPP have occurred in the United States since January 1997. All cases were associated with receipt of the first or second dose of OPV vaccine in an all OPV schedule; three cases were in OPV recipients, and one case was in an adult contact of an OPV recipient.

To further reduce the incidence of VAPP by decreasing reliance on OPV for the initial doses of poliovirus vaccine, in October 1998, ACIP changed the routine childhood polio vaccination schedule. Use of OPV is no longer recommended for the first two doses

IPV/OPV Vaccination Coverage — Continued

except in special circumstances (e.g., a child whose parents do not accept the recommended number of injections or who will be traveling to areas with endemic polio). OPV remains the vaccine of choice for mass vaccination campaigns to control outbreaks associated with wild poliovirus.

References

1. CDC. Poliomyelitis prevention in the United States: introduction of a sequential vaccination schedule of inactivated poliovirus vaccine followed by oral poliovirus vaccine; recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 1997;46 (no. RR-3).
2. Melman ST, Chawla J, Kaplan JM, Anhar RD. Multiple immunizations: ouch! *Arch Fam Med* 1994;3:615-7.
3. Davis RL, Black S, Vadheim C, et al. Immunization tracking systems: experience of the CDC Vaccine Safety Datalink sites. *HMO Practice* 1997;11:13-7.
4. Kolasa M, Desai S, Bisgard K, Prevots R. Is the new poliovirus recommendation acceptable to parents? Abstracts of the 1998 Pediatric Academic Societies' Annual Meeting. New Orleans, Louisiana, June 12-14, 1997.
5. Melman ST, Ehrlich ES, Klugman D, Nguyen TT, Anbar RD. Parental compliance with initiation of the sequential schedule for infant polio immunization. 1998 Pediatric Academic Societies' Annual Meeting, May 1-5, 1998, New Orleans, Louisiana. Abstract no. 104.
6. Stevenson JM, Chen W, Brown P, Maley M. Implementation and impact of the ACIP recommended sequential schedule for IPV/OPV. 1998 Pediatric Academic Societies' Annual Meeting, May 1-5, 1998, New Orleans, LA. Abstract no. 363.

Fatal Car Trunk Entrapment Involving Children — United States, 1987-1998

During July-August 1998, at least 11 U.S. children died in three separate incidents of car trunk entrapment. This report summarizes these three incidents, describes characteristics of car trunk entrapment incidents involving children since 1987, and reviews measures to prevent children from becoming trapped in car trunks. The findings indicate that at least nine incidents of fatal car trunk entrapment involving children occurred during 1987-1998, that all incidents occurred in hot weather and involved children aged ≤ 6 years, and that these deaths were preventable.

Case Reports

Incident 1. On July 13, 1998, at approximately 6 p.m., four children aged 2-5 years were discovered inside the closed trunk of a car in Gallup, New Mexico. The children had climbed into the car's open trunk and had not been seen for 1 hour before a search began. They were found approximately 1 hour after the search began. The outside ambient temperature that afternoon was 90 F (32.2 C). The children were rushed to a local emergency department, where three were pronounced dead. The remaining child, a 5-year-old girl, was transported to a tertiary-care hospital, where her rectal temperature was recorded at 108 F (42.2 C); she died on July 14. No carbon monoxide was detected in blood samples of the children. The autopsy report cited hyperthermia and asphyxia as the causes of death.

Incident 2. On August 2, 1998, at approximately 1 p.m., two brothers aged 2 and 5 years from Greene County, Pennsylvania, were found dead in the trunk of their parents' car in front of their house. The boys had found the car keys, opened the trunk, and climbed inside. They were missing for several hours during the morning and early

Fatal Car Trunk Entrapment — Continued

afternoon. The outside ambient temperature that afternoon was approximately 85 F (29.5 C). The autopsy report cited hyperthermia and asphyxia as the causes of death.

Incident 3. On August 8, 1998, at 4:15 p.m., five girls in West Valley City, Utah, aged 2–6 years, were found dead inside the trunk of a car owned by one of the children's parents. The car had been parked at one of the children's residence. The outside ambient temperature was 100 F (37.8 C). The vehicle's trunk-release lever was adjacent to the driver's seat, and at least one of the two 6-year-old girls reportedly knew how to operate the release lever. The children had not been seen for approximately 20 minutes before a search began and were found approximately 1½ hours after the search began. Liver temperatures taken at the death scene 1½–2 hours after the children were found ranged from 99 F to 117 F (37.2 C to 47.2 C). The autopsy report cited the cause of death as hyperthermia.

Surveillance for Fatalities Associated with Trunk Entrapments, 1987–1998

The LEXIS-NEXIS database (1) was used to search newspapers, magazines, wire services, and broadcast transcripts for additional deaths associated with car trunk entrapment. During 1987–1998, nine incidents were identified of fatal car trunk entrapment involving children, including the three incidents described in this report. Medical examiner/coroner (ME/C) offices were contacted for information about death investigations and autopsy findings. ME/C offices provided written and verbal cause-of-death information for seven of the incidents, and for two incidents, information was obtained from media sources, who cited coroner's reports for cause-of-death information.

A total of 19 children aged ≤6 years died in the nine incidents. Eighteen children underwent autopsies. The cause of death for all children was either hyperthermia or a combination of hyperthermia and asphyxia. Three of the nine incidents occurred during the summer of 1998 and accounted for 11 (58%) of the 19 deaths. Eight incidents occurred when outside ambient temperatures were at least 90 F (32.2 C) (Table 1), and at least five (56%) of the cars involved were parked in direct sunlight.

The method of trunk entry varied among the nine incidents. In two incidents, children found the keys to their parents' cars and opened the trunks. In two other incidents, children entered trunks without using a key—either a driver's side trunk-release lever or a manual release on the trunk itself was present. In one additional incident, four children climbed into an open trunk. The method of trunk entry could not be determined for the remaining four incidents. At least 15 children died in cars parked either at their own houses or at a relative's or neighbor's house. In three incidents, a dead child was alone in the trunk. In one incident, one 3-year-old child survived, and a 4-year-old child died. In six incidents, children were missing approximately 1–2½ hours. In two other incidents, they were missing for 5–8 hours.

Reported by: AP Hart, MD, RE Zumwalt, MD, PJ McFeeley, MD, Office of the Medical Investigator, Univ of New Mexico School of Medicine, Albuquerque, New Mexico. B Marchant, TC Grey, MD, Office of the Medical Examiner, Salt Lake City, Utah. G Rohanna, Greene County Coroner's Office, Greene County, Pennsylvania. E Darby, Cherokee County Coroner's Office, Cherokee County, Georgia. S Hill, Riverside County Coroner's Office, Riverside County, California. M Day, Macon County Coroner's Office, Macon County, Illinois. Surveillance and Programs Br, and Health Studies Br, Div of Environmental Hazards and Health Effects, National Center for Environmental Health; and an EIS Officer, CDC.

Editorial Note: Although heat-related deaths in the United States have been described previously (2,3), the number and characteristics of car trunk entrapment-related

Fatal Car Trunk Entrapment — Continued

TABLE 1. Selected characteristics of deaths associated with car trunk entrapments among children, by year — United States, 1987–1998

Year	No. children	Age (yrs)	Month	Cause of death*	Outside temperature†	Time missing (hrs)
1987	1	4	July	§	101 F (38.3 C)	8
1987	1	3	August	Hyperthermia	91 F (32.7 C)	2
1989	1	5	June	§	106 F (41.1 C)	2½
				Hyperthermia/ Asphyxiation¶		
1993	2	3,5	July		97 F (36.1 C)	§
1994	1	4	August	Hyperthermia	101 F (38.3 C)	1
				Hyperthermia/ Asphyxiation		
1995	2	3,4	May		90 F (32.2 C)	2
				Hyperthermia/ Asphyxiation		
1998	4	2,3,5,5	July		90 F (32.2 C)	2
				Hyperthermia/ Asphyxiation		
1998	2	2,5	August	Asphyxiation	85 F (29.4 C)	5
1998	5	2,3,5,6,6	August	Hyperthermia	100 F (37.7 C)	2

* Medical examiners/coroners provided written and verbal cause-of-death information.

† Outside temperatures are approximated.

‡ Data were not available.

§ Information was available only for the 3-year-old.

deaths have not been described, and the identified cases probably represent a minimum number of such deaths. No surveillance system exists to detect or report car trunk entrapment-related deaths, and no *International Classification of Diseases, Ninth Revision*, external cause-of-injury code exists for deaths associated with car trunk entrapments.

Heatstroke (hyperthermia) is a medical emergency and is often fatal despite medical care (4). Heatstroke is usually designated when a rectal or core temperature reaches 105 F (40.6 C) (4,5). The car trunk entrapment-related deaths described in this report were mainly heat related—no deaths were identified that occurred when the outside temperature was <85 F (<29.5 C), and all causes of death included hyperthermia.

Cars parked in direct sunlight can reach internal temperatures up to 131 F–172 F (55 C–78 C) when outside temperatures are 80 F–100 F (27 C–38 C) (6,7). Cars that are parked in direct sunlight and that are poorly ventilated also reach higher temperatures more rapidly than cars that are parked in the shade or that have windows completely opened (7). Most temperature increases inside cars occur during the first 15 minutes of being left in the sun (8). In at least two incidents during the summer of 1998, deaths occurred in dark cars, and the dark color probably contributed to the intense heat in the trunks (6).

The major mechanism for heat loss by the body in high ambient temperatures is evaporation (7). This mechanism is quickly defeated in the rising humidity of closed car trunks. Younger children are more sensitive to heat than older children and adults and are at greater risk for heatstroke (5). In addition to heatstroke, asphyxia was listed as a contributing cause of death in four of the seven incidents for which ME/C data were obtained. The combination of high temperature, humidity, and poor ventilation all contribute to the extreme danger of car trunks (7).

Fatal Car Trunk Entrapment — Continued

The findings in this report are subject to at least three limitations. First, because LEXIS-NEXIS may exclude cases in areas with minimal media coverage, may overlook cases that are not in the database because of search technique, and does not contain all newspapers in the country, the total number of cases identified may be underestimated. Second, because primary source ME/C data were not obtained for two incidents, information accuracy in media reports used for analysis is unknown. Third, because autopsy findings are often minimal or nonspecific, determining cause of death for these types of deaths is largely dependent on the circumstances and a thorough examination of the death scene.

State and local public health officials can use the findings in this report to guide prevention messages about children playing in or around car trunks. Effective public health strategies to prevent deaths associated with car trunk entrapments should include 1) preventing children's access to car keys; 2) keeping cars locked, with trunks closed, when cars are not in use; and 3) supervising young children closely when they are around cars.

References

1. LEXIS-NEXIS [database online]. Dayton, Ohio: Reed Elsevier, 1998.
2. CDC. Heat-wave-related mortality Milwaukee—Wisconsin, July 1995. *MMWR* 1995;45:505-7.
3. CDC. Heat-related mortality—United States. *MMWR* 1998;47:473-6.
4. DiMaio DJ, DiMaio VJM. *Forensic Pathology*. Boca Raton, Florida: CRC Press, 1993:377-84.
5. Kilbourne EM. Heat waves and hot environments. Noji EK, ed. *The public health consequences of disasters*. New York, New York: Oxford University Press, 1997:245-69.
6. Zumwalt RE, Petty CS, Holman W. Temperature in closed automobiles in hot weather. *Forensic Sci Gazette* 1976;7:7-8.
7. Surpure J. Heat-related illness and the automobile. *Annals of Emergency Medicine* 1982;11:263-5.
8. Roberts KB, Roberts EC. The automobile and heat stress. *Pediatrics* 1976;58:101-4.

Forecasted State-Specific Estimates of Self-Reported Asthma Prevalence — United States, 1998

Asthma is a chronic inflammatory disorder of the lungs characterized by episodic and reversible symptoms of airflow obstruction (1). During 1993-1994, an estimated 13.7 million persons in the United States reported having asthma, and from 1980 to 1994 the prevalence of self-reported asthma in the United States increased 75% (2). Despite this increase, surveillance data are limited for asthma at the state and local levels (3). To estimate the 1998 prevalence rate of asthma for each state, CDC analyzed national self-reported asthma prevalence data from 1995. This report summarizes the results of the analyses, which project that approximately 17 million persons in the United States have asthma.

For this analysis, persons were considered to have asthma if they had had asthma diagnosed by a physician at some time in their life and had reported symptoms of asthma during the preceding 12 months. Using methods that have been applied elsewhere to forecast cancer rates (4), state-specific asthma prevalence estimates for 1998 were calculated using a three-step procedure: 1) race-, sex-, and age-specific asthma prevalence rates were calculated for each of the four U.S. census regions using data from the 1995 National Health Interview Survey (NHIS); 2) each state's 1998

Self-Reported Asthma Prevalence — Continued

demographic composition as estimated by the Bureau of Census was multiplied by the corresponding regional prevalences; and 3) linear extrapolations of region-specific increases in asthma prevalence from 1980 to 1994 were applied to the 3-year period from 1995 to 1998 for each state. Confidence intervals and relative standard errors for all estimates were calculated using regression parameters provided by CDC's National Center for Health Statistics for prevalence of chronic conditions (5).

In 1998, asthma affected an estimated 17,299,000 persons in the United States. The state with the largest estimated number of persons with asthma was California (2,268,300), followed by New York (1,236,200) and Texas (1,175,100) (Table 1). State-specific prevalence rates ranged from 5.8% to 7.2%. Differences in asthma prevalence rates between states were not significant. By region, 1-year period prevalence estimates ranged from 6.4% to 6.8% in the Northeast, 5.8% to 6.1% in the South, 6.6% to 6.7% in the Midwest, and 6.0% to 7.2% in the West.* The narrow range of prevalence rates within each of these regions indicates that state-specific differences in demographic composition minimally influenced estimated asthma prevalence.

Reported by: S Rappaport, MPH, B Boodram, MPH, Epidemiology and Statistics Unit, American Lung Association, New York City. Air Pollution and Respiratory Health Br, Div of Environmental Hazards and Health Effects, National Center for Environmental Health; and an EIS Officer, CDC.

Editorial Note: The findings in this report project state-specific prevalence rates of 5.8% to 7.2%. These findings are consistent with those from a study in Oregon, which estimated asthma prevalence at 6%–7% (6). However, surveys of self-reported asthma prevalence in Bogalusa, Louisiana (7), Chicago, Illinois (8), and Bronx, New York (9) all indicated estimates considerably higher than those in this report. State program planners can use these findings to estimate the burden of asthma within their states.

The findings in this report are subject to at least two limitations. First, the findings assume a linear growth in asthma prevalence since 1995. Although this linear assumption was selected after review of regional growth trends in asthma prevalence during the preceding 15 years (2), changes in the trends of self-reported asthma rates that may have occurred in the 3-year interval during 1995–1998 could not be captured by these linear extrapolations. Second, these results are based on the assumption that age, sex, and race-specific rates of asthma do not vary within any of the four geographic regions of the United States. Each state's estimated prevalence reflects its regional placement in the United States and its demographic composition. These analyses do not account for differences among states in the relative presence or absence of environmental risk factors in asthma prevalence, possible differences in genetic susceptibility toward the condition, or other sociodemographic indicators (e.g., poverty status). As a result, these findings underestimate the variability in asthma prevalence between states within regions. They also do not accurately represent asthma prevalence in geographic subpopulations within states.

* Northeast=Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont; Midwest=Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin; South=Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia; West=Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

Self-Reported Asthma Prevalence — Continued

TABLE 1. Forecasted estimates of self-reported asthma prevalence*, by state — United States, 1998

Region/State	No. cases	Estimated prevalence	(95% CI†)	Standard error
Northeast				
Connecticut	215,900	6.6%	(5.6%–7.5%)	7.2%
Maine	80,300	6.4%	(5.4%–7.4%)	7.8%
Massachusetts	401,000	6.5%	(5.6%–7.5%)	7.2%
New Hampshire	78,500	6.6%	(5.5%–7.6%)	7.8%
New Jersey	540,400	6.7%	(5.7%–7.6%)	7.2%
New York	1,236,200	6.8%	(5.8%–7.8%)	7.3%
Pennsylvania	800,900	6.6%	(5.6%–7.5%)	7.2%
Rhode Island	64,400	6.5%	(5.5%–7.4%)	7.3%
Vermont	39,500	6.5%	(5.5%–7.6%)	7.8%
Total	3,241,200	6.7%	(5.7%–7.6%)	7.3%
Midwest				
Iowa	190,100	6.6%	(5.6%–7.6%)	7.5%
Illinois	795,200	6.7%	(5.7%–7.6%)	7.5%
Indiana	398,400	6.7%	(5.7%–7.7%)	7.3%
Kansas	174,900	6.7%	(5.7%–7.6%)	7.3%
Michigan	642,300	6.7%	(5.7%–7.7%)	7.5%
Minnesota	318,600	6.7%	(5.8%–7.7%)	7.1%
Missouri	362,300	6.1%	(4.7%–7.4%)	11.3%
Nebraska	112,100	6.7%	(5.7%–7.7%)	7.4%
North Dakota	43,600	6.7%	(5.7%–7.6%)	7.3%
Ohio	748,200	6.7%	(5.7%–7.6%)	7.4%
South Dakota	51,000	6.7%	(5.8%–7.7%)	7.3%
Wisconsin	350,800	6.7%	(5.7%–7.7%)	7.2%
Total	4,187,600	6.6%	(5.6%–7.6%)	7.4%
South				
Alabama	280,500	6.0%	(4.8%–7.1%)	9.5%
Arkansas	162,600	5.9%	(4.9%–6.9%)	6.9%
District of Columbia	31,400	5.9%	(3.6%–8.2%)	19.7%
Delaware	44,300	5.9%	(4.9%–6.9%)	8.5%
Florida	863,900	5.8%	(4.9%–6.8%)	8.0%
Georgia	458,700	6.0%	(4.9%–7.2%)	9.7%
Kentucky	232,800	5.9%	(4.9%–6.9%)	8.2%
Louisiana	265,500	6.1%	(4.8%–7.3%)	10.5%
Maryland	307,300	6.5%	(5.6%–7.5%)	7.2%
Mississippi	167,900	6.1%	(4.7%–7.4%)	11.3%
North Carolina	447,200	5.9%	(4.9%–7.0%)	8.9%
Oklahoma	191,700	5.8%	(4.8%–6.7%)	7.9%
South Carolina	228,600	6.0%	(4.8%–7.2%)	10.1%
Tennessee	328,300	5.9%	(4.9%–6.9%)	8.3%
Texas	1,175,100	6.0%	(5.0%–7.0%)	8.2%
Virginia	403,400	5.9%	(4.9%–6.9%)	8.6%
West Virginia	108,600	5.8%	(4.9%–6.8%)	8.2%
Total	5,697,800	5.9%	(4.9%–7.0%)	8.8%
West				
Alaska	42,500	6.7%	(5.7%–7.7%)	7.7%
Arizona	316,200	6.9%	(6.0%–7.9%)	6.9%
California	2,268,300	7.1%	(6.1%–8.0%)	6.8%
Colorado	283,700	7.1%	(6.1%–8.0%)	6.8%
Hawaii	73,100	6.0%	(4.1%–7.8%)	15.3%
Idaho	86,100	6.7%	(5.7%–7.8%)	7.6%
Montana	61,600	6.6%	(5.7%–7.6%)	7.4%
Nevada	125,700	7.2%	(6.3%–8.1%)	6.4%
New Mexico	121,800	6.8%	(5.8%–7.8%)	7.2%
Oregon	225,900	6.9%	(5.9%–7.8%)	6.9%
Utah	141,200	6.7%	(5.6%–7.8%)	8.1%
Washington	391,900	6.9%	(5.9%–7.8%)	6.8%
Total	4,172,400	7.0%	(6.0%–8.0%)	7.0%
Total	17,299,000	6.4%	(5.5%–7.5%)	7.8%

*Persons were considered to have asthma if they had had asthma diagnosed by a physician at some time in their life and had reported symptoms of asthma during the preceding 12 months.

†Confidence interval.

Self-Reported Asthma Prevalence — Continued

Asthma is the ninth leading cause of hospitalization nationally (10). Its severity can be managed with appropriate medical treatment, education, and environmental modification (1). However, fewer than 10 states have conducted asthma prevalence surveys. The initiation of state-based asthma control and management programs will require better state and local data on asthma prevalence to evaluate the effectiveness of these programs. State-level surveillance could incorporate existing data such as hospital discharge data and managed-care data. Questions about asthma could also be added to state and community-level surveys such as the State and Local Integrated Telephone Survey and other surveys conducted in individual states such as the Behavioral Risk Factor Surveillance System.

State-based surveys should include questions related to asthma diagnosis, severity, management techniques, and known geographic and household risk factors. These surveillance data will provide a foundation for planning and evaluating asthma-control programs, identifying high-risk and hard-to-access populations, and structuring health promotion and education initiatives.

References

1. National Institutes of Health. Practical guide for the diagnosis and management of asthma. Washington, DC: U.S. Department of Health and Human Services, National Institutes of Health. (Publication no. 97-4053).
2. CDC. Surveillance for asthma—United States, 1960–1995. *MMWR* 1998;47(no. SS-1).
3. Brown CM, Anderson HA, Etzel RA. Asthma: the states' challenge. *Public Health Reps* 1997;112:198–205.
4. Landis SH, Murray T, Bolden S, Wingo PA. Cancer statistics, 1998. *CA Cancer J Clin* 1998;48:6–9.
5. CDC. Vital and health statistics: design and estimation for the National Health Interview Survey. Washington, DC: US Department of Health and Human Services, CDC, National Center for Health Statistics, 1989; DHHS publication no. (PHS) 89-1384. (Series 2, no. 110).
6. Ertle AR, London MR. Insights into asthma prevalence in Oregon. *J Asthma* 1998;35:281–9.
7. Farber HJ, Wattigney W, Berenson G. Trends in asthma prevalence: The Bogalusa Heart Study. *Ann Allergy Asthma Immunol* 1997;78:265–9.
8. Persky VW, Slezak J, Contreras A, et al. Relationships of race and socioeconomic status with prevalence, severity, and symptoms of asthma in Chicago school children. *Ann Allergy Asthma Immunol* 1998;81:266–71.
9. Crain EF, Weiss KB, Bijur PE, Hersh M, Westbrook L, Stein RE. An estimate of the prevalence of asthma and wheezing among inner-city children. *Pediatrics* 1994;94:356–62.
10. CDC. National Hospital Discharge Survey: annual summary, 1995. Washington, DC: US Department of Health and Human Services, CDC; DHHS publication no. (PHS) 98-1794. (Series 13, no. 133).

Abortion Surveillance: Preliminary Analysis — United States, 1996

For 1996, CDC compiled data about legal induced abortions from the 50 states, New York City, and the District of Columbia. The total number of legal induced abortions was available from all reporting areas; however, not all areas collected information about the characteristics of women who obtained abortions. This report presents preliminary data for 1996; final abortion data for 1996 will be published during spring 1999.

In 1996, a total of 1,221,585 legal induced abortions were reported to CDC (Table 1), a slight increase of 0.9% from the number reported for 1995 (1). The number of live births decreased slightly by 0.2% during the same period (2). From 1995 to 1996, the

Abortion Surveillance — Continued

TABLE 1. Reported number of legal induced abortions, abortion ratios,* abortion rates,† and characteristics of women who obtained legal induced abortions, by year — United States, selected years, 1972–1996

Characteristic	1972	1976	1980	1985	1990	1991	1992	1993	1994	1995	1996 [‡]
Reported no. legal abortions	586,760	988,267	1,297,606	1,328,570	1,429,577	1,388,937	1,359,145	1,330,414	1,267,415	1,210,883	1,221,585
Abortion ratio	180	312	359	354	345	339	335	334	321	311	314
Abortion rate	13	21	25	24	24	24	23	22	21	20	20
Percentage distribution [§]											
Residence											
In-state	56.2	90.0	92.6	92.4	91.8	91.8	91.6	92.0	91.4	91.5	91.7
Out-of-state	43.8	10.0	7.4	7.6	8.2	8.2	8.4	8.0	8.6	8.5	8.3
Age group (yrs)											
≤19	32.6	32.1	29.2	26.3	22.4	21.0	20.1	20.0	20.2	20.1	20.3
20–24	32.5	33.3	35.5	34.7	33.2	33.4	34.5	34.4	34.3	34.5	31.9
≥25	34.9	34.6	35.3	39.0	44.4	44.6	45.4	45.6	46.3	47.4	47.8
Race											
White	77.0	66.6	69.9	66.6	64.8	63.8	61.5	60.9	60.5	59.5	59.1
Black	23.0	33.4	30.1	29.8	31.8	32.5	33.9	34.9	34.7	35.0	35.2
Other**	—	—	—	3.5	3.4	3.7	4.6	4.2	4.8	5.5	5.7
Ethnicity											
Hispanic	—	—	—	—	9.8	13.5	15.2	14.7	14.5	15.4	16.1
Non-Hispanic	—	—	—	—	90.2	86.5	84.8	85.3	85.5	84.6	83.9
Marital status											
Married	29.7	24.6	23.1	19.3	21.7	21.4	20.8	20.4	19.9	19.7	20.1
Unmarried	70.3	75.4	76.9	80.7	78.3	78.6	79.2	79.6	80.1	80.3	79.9
No. live births ^{††}											
0	49.4	47.7	58.4	56.3	49.2	47.8	45.9	46.3	46.2	45.2	44.2
1	18.2	20.7	19.4	21.6	24.4	25.3	25.9	26.0	25.9	26.5	26.8
2	13.3	15.4	13.7	14.5	16.9	17.4	18.0	17.8	17.8	18.0	18.4
3	8.7	8.3	5.3	5.1	6.1	6.4	6.7	6.6	6.7	6.8	7.0
≥4	10.4	7.9	3.2	2.5	3.4	3.4	3.5	3.3	3.4	3.5	3.6
Type of procedure											
Curettage	88.6	92.8	95.5	97.5	98.8	98.9	98.9	99.0	99.1	98.9	98.8
Suction	65.2	82.6	89.8	94.6	96.0	97.3	97.0	96.4	96.5	96.6	96.5
Sharp	23.4	10.2	5.7	2.9	2.8	1.6	1.9	2.6	2.6	2.3	2.3
Intrauterine											
insillation	10.4	6.0	3.1	1.7	0.8	0.7	0.7	0.6	0.5	0.5	0.4
Other ^{‡‡}	1.0	1.2	1.4	0.8	0.4	0.4	0.4	0.4	0.4	0.6	0.8

Abortion Surveillance — Continued

Weeks' gestation	34.0	47.0	51.7	50.3	51.6	52.3	52.1	52.3	53.7	54.0	54.6
≤6	—	—	—	—	—	—	14.3 ^W	14.7 ^{***}	15.7 ^{†††}	15.7 ^{†††}	16.4 ^{§§§}
≤6	—	—	—	—	—	—	15.6 ^W	16.2 ^{***}	16.5 ^{†††}	17.1 ^{†††}	17.4 ^{§§§}
7	—	—	—	—	—	—	22.2 ^W	21.6 ^{***}	21.6 ^{†††}	21.2 ^{†††}	20.9 ^{§§§}
8	—	—	—	—	—	—	24.2	24.4	23.5	23.1	22.6
9-10	30.7	28.1	26.2	26.6	25.3	25.1	24.2	24.4	23.5	23.1	22.6
11-12	17.5	14.4	12.2	12.5	11.7	11.5	12.0	11.6	10.9	10.9	11.0
13-15	8.4	4.5	5.1	5.9	6.4	6.1	6.0	6.3	6.3	6.3	6.0
16-20	8.2	5.1	3.9	3.9	4.0	3.9	4.2	4.1	4.3	4.3	4.3
≥21	1.2	0.9	0.9	0.8	1.0	1.1	1.5	1.3	1.3	1.4	1.5

* Number of legal induced abortions per 1000 live births.

† Number of legal induced abortions per 1000 women aged 15-44 years.

‡ Preliminary data. The number of areas reporting a given characteristic varied. For 1996, the number of areas reporting residence was 45; age, 45; race, 38; ethnicity, 23; marital status, 34; number of live-born infants, 39; type of procedure, 41; and weeks of gestation, 40.

§ Percentage distributions are based on known values in data from all areas reporting a given characteristic, except where the proportion of unknown values exceeded 15%.

** Reported as "other race."

†† For years 1972 and 1976, data indicate number of living children.

‡‡ Includes hysterectomy and hysterectomy and procedures reported as "other."

§§ Data are for 36 of 39 areas reporting weeks of gestation.

*** Data are for 38 of 41 areas reporting weeks of gestation.

††† Data are for 38 of 41 areas reporting weeks of gestation.

§§§ Data are for 37 of 40 areas reporting weeks of gestation.

Abortion Surveillance — Continued

number of reported abortions decreased in 26 of 52 reporting areas. From 1995 to 1996, the national abortion ratio (number of legal abortions per 1000 live births reported by all reporting areas) increased slightly, from 311 to 314, respectively (Table 1), and the national abortion rate (number of legal abortions per 1000 women aged 15–44 years) remained stable at 20. Consistent with previous years, approximately 92% of women who had legal abortions were residents of the state in which the procedure was performed.

Women who obtained legal induced abortions in 1996 were predominately white and unmarried. As in 1995, approximately 20% of women who obtained legal abortions in 1996 were aged ≤19 years; 32% were aged 20–24 years. Curettage (suction and sharp) remained the primary abortion procedure (99% of all procedures). As in previous years, more than half of legal abortions (55%) were performed during the first 8 weeks of gestation; specifically, 16% were at ≤6 weeks; 17% at 7 weeks; and 21% at 8 weeks. Approximately 88% of abortions were performed during the first 12 weeks of pregnancy.

Reported by: Surveillance Unit, Statistics and Computer Resources Br, Div of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion, CDC.

Editorial Note: From 1980 to 1990, the number of legal induced abortions in the United States varied by ≤5% annually and increased overall by 10% (1). However, from 1990 (the year in which the number of abortions was highest) to 1995, the number of reported abortions decreased by 15%. In 1996, the number increased slightly by 0.9%.

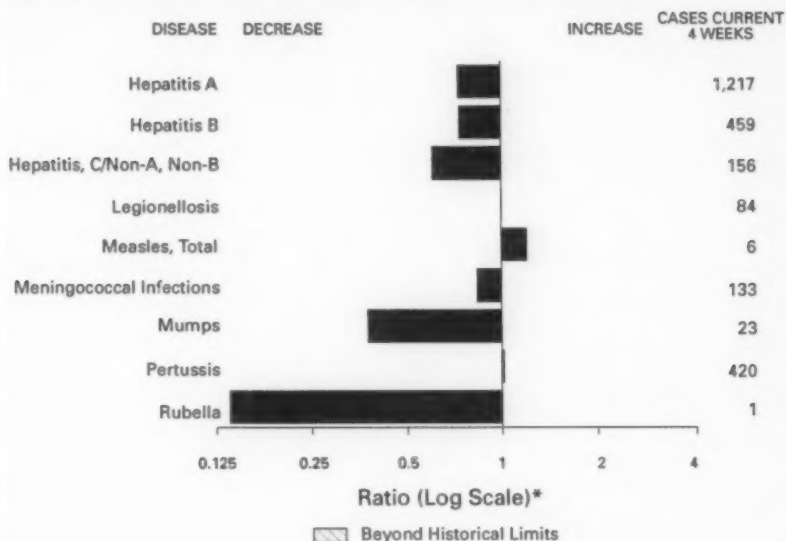
During 1972–1980, the national legal abortion rate increased each year; during 1980–1992, the rate remained stable, then declined during 1992–1995. The 1996 abortion rate of 20 per 1000 women of reproductive age (i.e., aged 15–44 years) remained unchanged from 1995 and was the lowest rate recorded since 1975 (1,3).

From 1987 to 1995, the national ratio of abortions to live births steadily declined each year reaching the lowest level in 1995 for any year since 1975 (1,3). In 1996, despite an increase in the ratio, the ratio was still at its lowest recorded level since 1976 (1,4). The ratio increased in 1996 because the numerator of this ratio (the number of abortions) increased slightly, and the denominator (the number of live births) decreased slightly. Factors contributing to the decrease in the proportion of pregnancies that ended in abortion since 1990 include a reduction in the number of unintended pregnancies, attitudinal changes concerning the decision to have an abortion or to carry a pregnancy to term, and reduced access to abortion services (5–7).

The decline in the abortion ratios also may be attributed to a shift in the age distribution of reproductive-aged women obtaining abortions. Although the actual number of women of reproductive age in the United States has increased by 12% since 1980, the proportion who are older (i.e., in later, less fertile reproductive years) has increased (2). For example, from 1980 to 1996, the percentage of women of reproductive age who were aged <30 years (the age group having highest fertility) declined from 58% to 45%, respectively (Bureau of the Census, unpublished data, 1998), and the percentage of women aged 35–44 years (the age group having lowest fertility) increased from 25% to 37%, respectively.

During 1996, the total number of legal induced abortions were available for all 52 reporting areas. However, approximately 31% of abortions were reported from states that, in 1996, did not have centralized reporting of abortions (four states) or from states whose state health departments did not collect, and therefore could not pro-

(Continued on page 1035)

FIGURE 1. Selected notifiable disease reports, comparison of provisional 4-week totals ending November 28, 1998, with historical data — United States

*Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE 1. Summary — provisional cases of selected notifiable diseases, United States, cumulative, week ending November 28, 1998 (47th Week)

	Cum. 1998		Cum. 1998
Anthrax	-	Plague	8
Brucellosis	52	Poliomyelitis, paralytic	1
Cholera	12	Psittacosis	46
Congenital rubella syndrome	3	Rabies, human	-
Cryptosporidiosis*	2,920	Rocky Mountain spotted fever (RMSF)	308
Diphtheria	1	Streptococcal disease, invasive Group A	1,891
Encephalitis: California*	82	Streptococcal toxic-shock syndrome*	46
eastern equine*	3	Syphilis, congenital†	361
St. Louis*	24	Tetanus	34
western equine*	-	Toxic-shock syndrome	122
Hansen Disease	100	Trichinosis	12
Hantavirus pulmonary syndrome*‡	19	Typhoid fever	299
Hemolytic uremic syndrome, post-diarrheal*	78	Yellow fever	-
HIV infection, pediatric§	230		

-no reported cases

*Not notifiable in all states.

† Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases (NCID).

‡ Updated monthly from reports to the Division of HIV/AIDS Prevention—Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention (NCHSTP), last update October 25, 1998.

§ Updated from reports to the Division of STD Prevention, NCHSTP.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending November 28, 1998, and November 22, 1997 (47th Week)

Reporting Area	AIDS		Chlamydia		Escherichia coli O157:H7		Gonorrhea		Hepatitis C/NAHB	
	Cum. 1998*	Cum. 1997	Cum. 1998	Cum. 1997	NETSS ¹ PHILIS ¹		Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997
					Cum. 1998	Cum. 1997				
UNITED STATES	38,924	51,445	492,859	424,676	2,736	1,782	297,085	268,538	4,521	3,147
NEW ENGLAND	1,539	2,235	18,518	16,330	314	246	4,698	5,395	88	52
Maine	26	50	959	906	35	-	61	61	-	-
N.H.	26	39	860	735	43	43	81	86	-	-
Vt.	16	32	378	398	19	17	34	47	3	3
Mass.	795	803	7,588	6,650	144	142	2,077	1,915	82	42
R.I.	108	133	2,060	1,835	12	1	371	396	3	7
Conn.	574	1,178	4,673	5,818	61	43	2,074	2,890	-	-
MID. ATLANTIC	10,425	15,287	54,804	51,706	274	70	33,433	34,684	334	287
Upstate N.Y.	1,249	2,371	N	N	206	-	6,027	5,868	249	214
N.Y. City	5,885	8,011	31,564	24,928	8	12	14,164	13,153	-	-
N.J.	1,900	3,044	9,954	9,125	60	48	6,998	6,875	-	-
Pa.	1,382	1,861	13,086	17,653	10	10	6,244	8,788	85	73
E.N. CENTRAL	2,741	3,819	60,271	57,929	422	305	58,023	37,347	460	499
Ohio	562	786	22,949	20,387	115	61	14,997	13,344	8	18
Ind.	448	483	4,656	8,516	94	47	4,477	5,568	7	12
Ill.	1,044	1,517	24,415	U	105	58	20,274	U	32	84
Mich.	531	800	18,875	18,952	108	62	14,220	13,965	413	360
Wis.	156	233	9,376	10,074	N	77	4,055	4,470	-	25
W.N. CENTRAL	754	1,039	27,940	29,661	458	375	14,393	13,068	266	58
Minn.	146	191	5,743	6,070	191	197	2,201	2,138	10	4
Iowa	60	93	2,063	3,943	93	56	680	1,012	8	27
Mo.	367	509	10,936	10,996	45	60	8,120	6,742	241	10
N. Dak.	5	10	849	794	11	15	71	66	-	3
S. Dak.	15	8	1,418	1,254	33	34	207	151	-	-
Nebr.	50	84	2,364	2,432	54	-	960	1,072	4	2
Kans.	102	144	4,567	4,172	31	13	2,174	1,887	3	12
S. ATLANTIC	10,118	12,835	101,191	85,207	246	146	83,159	83,986	169	228
Del.	122	210	2,354	49	-	2	1,387	1,164	-	-
Md.	1,400	1,798	6,619	6,765	35	14	8,638	10,424	15	10
D.C.	751	978	N	N	1	-	3,163	4,011	-	-
Va.	771	1,086	11,750	N	N	42	8,169	7,958	11	25
W. Va.	72	108	2,355	2,654	12	7	744	840	6	16
N.C.	704	764	20,065	15,743	54	48	17,266	15,703	20	47
S.C.	640	704	14,761	11,327	17	9	9,335	10,420	9	37
Ga.	1,055	1,468	20,637	14,146	73	-	17,198	16,502	9	-
Fla.	4,603	5,709	22,650	23,828	54	26	17,259	16,964	99	93
E.S. CENTRAL	1,598	1,859	35,095	32,079	111	39	34,516	32,095	181	327
Ky.	249	340	5,834	5,695	32	-	3,390	3,662	19	13
Tenn.	591	717	12,078	11,551	53	33	10,508	10,121	155	217
Ala.	417	511	9,150	7,763	23	2	11,714	10,850	5	11
Miss.	341	291	8,033	7,070	3	4	8,904	7,462	2	86
W.S. CENTRAL	4,758	5,808	68,112	60,578	115	24	41,872	39,598	398	460
Ark.	177	216	3,607	2,518	11	10	3,607	4,264	10	14
La.	819	975	13,684	9,098	5	7	11,720	8,862	103	207
Okl.	256	274	8,611	6,669	23	7	4,796	4,334	14	7
Tex.	3,506	4,143	42,210	42,293	76	-	21,749	22,138	271	232
MOUNTAIN	1,360	1,540	29,537	27,113	337	217	8,285	7,416	335	289
Mont.	26	40	1,205	1,086	15	-	44	55	7	21
Idaho	27	50	1,848	1,489	38	23	158	137	87	65
Wyo.	3	14	626	542	53	55	29	47	66	72
Colo.	254	366	7,385	6,654	89	64	2,075	2,084	33	31
N. Mex.	189	164	3,491	3,460	19	13	839	784	92	56
Ariz.	549	375	10,243	9,737	21	26	3,717	3,318	8	25
Utah	114	132	1,973	1,588	80	21	207	249	23	5
Nev.	198	399	2,766	2,557	22	15	1,216	742	19	14
PACIFIC	5,631	7,223	79,591	64,073	459	360	18,706	14,949	2,290	947
Wash.	375	570	9,672	8,377	104	104	1,742	1,753	22	25
Oreg.	146	261	5,434	4,499	100	94	792	672	5	3
Calif.	4,949	6,257	60,719	48,184	248	147	15,470	11,724	2,208	758
Alaska	17	43	1,603	1,387	7	-	266	339	1	-
Hawaii	144	92	2,163	1,626	N	15	436	461	54	161
Guam	1	2	201	193	N	-	24	27	-	-
P.R.	1,499	1,716	U	U	6	U	342	499	U	-
V.I.	31	94	N	U	N	U	U	U	U	U
Amer. Samoa	-	-	U	U	N	U	U	U	U	U
C.N.M.I.	-	1	N	N	N	U	28	22	-	2

N: Not notifiable U: Unavailable -: no reported cases C.N.M.I.: Commonwealth of Northern Mariana Islands

*Updated monthly from reports to the Division of HIV/AIDS Prevention-Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention, last update October 25, 1998.

¹National Electronic Telecommunications System for Surveillance.

²Public Health Laboratory Information System.

TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending November 28, 1998, and November 22, 1997 (47th Week)

Reporting Area	Legionellosis		Lyme Disease		Malaria		Syphilis (Primary & Secondary)		Tuberculosis		Rabies, Animal
	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998*	Cum. 1997	Cum. 1998
UNITED STATES	1,175	973	11,733	11,114	1,233	1,681	6,370	7,626	12,979	15,970	6,195
NEW ENGLAND	77	77	2,538	2,848	55	79	89	124	410	398	1,318
Maine	1	3	11	8	5	1	1	2	10	18	202
N.H.	7	7	44	36	5	8	2	-	12	15	74
Vt.	7	12	11	8	1	2	4	-	4	5	61
Mass.	30	27	704	284	16	30	42	62	229	226	470
R.I.	19	11	603	380	10	7	1	2	50	31	88
Conn.	13	17	1,165	2,132	18	31	19	58	105	103	423
MID. ATLANTIC	284	214	7,743	6,478	312	479	243	362	2,729	2,851	1,437
Upstate N.Y.	99	66	3,841	2,691	87	67	35	36	354	401	1,000
N.Y. City	27	23	28	168	147	296	72	79	1,352	1,447	U
N.J.	15	28	1,589	1,795	49	83	78	145	562	611	202
Fa.	143	97	2,275	1,824	29	33	58	102	461	392	235
E.N. CENTRAL	375	320	158	570	118	152	987	584	1,109	1,573	127
Ohio	124	114	81	37	15	18	124	196	87	236	55
Ind.	112	52	57	33	11	16	210	162	101	137	11
Ill.	32	33	8	13	36	60	424	U	564	823	16
Mich.	75	82	12	27	47	42	176	128	339	264	35
Wis.	32	39	U	460	9	16	53	98	18	113	10
W.N. CENTRAL	72	56	192	149	90	57	117	163	360	500	640
Minn.	8	3	157	110	55	28	9	16	133	134	112
Iowa	10	9	22	6	8	9	-	7	43	46	139
Mo.	24	20	2	26	15	11	88	107	93	209	25
N. Dak.	3	2	-	-	1	3	-	-	8	12	131
S. Dak.	3	2	-	-	1	1	1	1	17	10	143
Nebr.	19	15	3	2	1	1	6	3	27	20	7
Kans.	8	5	8	4	9	4	13	29	39	69	83
S. ATLANTIC	135	113	811	727	297	301	2,353	3,175	1,788	3,044	1,780
Del.	13	11	40	109	3	5	20	22	18	32	30
Md.	28	19	567	462	85	79	599	836	255	282	416
D.C.	7	4	4	9	18	19	73	102	93	91	-
Va.	20	25	65	62	53	64	137	220	250	275	519
W. Va.	N	N	12	10	2	1	3	3	38	49	70
N.C.	14	14	54	32	27	18	675	899	409	374	138
S.C.	10	8	7	2	6	17	305	333	214	304	140
Ga.	8	1	5	7	37	46	255	484	441	542	272
Fla.	33	31	57	34	66	52	286	276	70	1,095	197
E.S. CENTRAL	59	53	85	86	30	36	1,101	1,545	961	1,174	251
Ky.	25	11	24	16	6	12	100	123	152	167	30
Tenn.	22	31	42	39	16	8	510	672	341	412	132
Ala.	5	4	17	10	6	10	262	379	302	380	87
Miss.	7	7	2	21	2	6	229	371	166	215	2
W.S. CENTRAL	39	33	24	89	28	54	932	1,194	1,636	2,297	135
Ark.	-	2	6	25	1	5	100	149	136	171	31
La.	4	6	4	3	15	13	394	331	255	199	-
Okl.	12	2	2	26	4	8	113	112	147	186	104
Tex.	23	23	12	35	8	28	325	602	1,298	1,741	-
MOUNTAIN	72	62	22	12	61	65	211	163	393	500	210
Mont.	2	1	-	-	1	2	-	-	18	16	51
Idaho	2	2	5	3	8	-	2	1	13	11	-
Wyo.	1	1	1	3	-	2	1	-	4	2	63
Colo.	17	18	5	-	19	30	11	15	U	76	39
N. Mex.	2	3	4	1	12	8	22	8	63	60	6
Ariz.	19	12	1	2	8	11	160	124	182	207	19
Utah	22	18	-	1	1	3	4	5	48	28	26
Nev.	7	7	6	2	12	9	11	10	65	100	6
PACIFIC	62	45	160	155	242	458	357	316	3,393	3,633	297
Wash.	12	8	7	10	17	46	27	9	194	265	-
Oreg.	1	-	21	17	16	25	6	9	124	135	7
Calif.	47	36	131	126	201	373	322	296	2,884	3,011	267
Alaska	1	-	1	2	3	3	1	1	46	66	23
Hawaii	1	1	-	-	5	11	1	1	145	156	-
Guam	2	-	-	-	1	-	1	3	36	13	-
P.R.	-	-	-	-	-	5	168	228	68	184	49
V.I.	U	U	U	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	-	-	-	-	-	164	11	77	17	-

N: Not notifiable

U: Unavailable

-: no reported cases

TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending November 28, 1998, and November 22, 1997 (47th Week)

Reporting Area	<i>H. influenzae</i> , invasive		Hepatitis (Viral), by type				Measles (Rubella)				Total	
	Cum. 1998*	Cum. 1997	A		B		Indigenous		Imported [†]		Cum. 1998	Cum. 1997
			Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	1998	Cum. 1998	1998	Cum. 1998		
UNITED STATES	928	973	19,898	25,788	7,821	8,610	1	61	-	25	86	129
NEW ENGLAND	61	56	252	602	175	164	-	1	-	2	3	19
Maine	3	5	19	59	5	6	-	-	-	-	-	1
N.H.	9	10	14	33	18	16	-	-	-	-	-	1
Vt.	7	3	16	13	6	11	-	-	-	1	1	-
Mass.	36	32	104	246	55	69	-	1	-	1	2	16
R.I.	5	3	16	126	66	14	-	-	-	-	-	-
Conn.	1	2	83	125	25	48	-	-	-	-	-	1
MID. ATLANTIC	137	151	1,341	1,939	1,014	1,244	-	8	-	6	14	26
Upstate N.Y.	69	50	328	336	270	286	-	1	-	1	2	5
N.Y. City	26	41	351	848	261	429	-	-	-	-	-	10
N.J.	46	42	307	284	176	226	-	7	-	1	8	3
Pa.	6	18	355	471	307	303	-	-	-	4	4	8
E.N. CENTRAL	153	150	3,267	2,729	1,423	1,367	1	12	-	3	15	10
Ohio	46	81	280	289	72	79	-	-	-	1	1	-
Ind.	39	14	310	258	718	94	-	2	-	1	3	-
Ill.	53	37	619	755	177	257	1	1	-	-	1	7
Mich.	8	17	1,900	1,218	416	407	-	9	-	1	10	2
Wis.	7	1	158	169	40	530	-	-	-	-	-	1
W.N. CENTRAL	83	57	1,239	2,000	367	441	-	1	-	-	1	17
Minn.	65	44	118	192	48	41	-	-	-	-	-	8
Iowa	2	6	392	426	54	39	U	1	U	-	1	-
Mo.	9	4	562	1,021	219	310	-	-	-	-	-	1
N. Dak.	-	-	3	10	4	5	-	-	-	-	-	-
S. Dak.	-	2	31	23	2	1	-	-	-	-	-	8
Nebr.	1	1	39	86	14	16	-	-	-	-	-	-
Kans.	6	-	94	242	26	29	-	-	-	-	-	-
S. ATLANTIC	179	152	1,827	1,844	1,043	1,113	-	3	-	5	8	14
Del.	-	-	3	29	3	6	-	-	-	1	1	-
Md.	51	56	306	178	146	154	-	-	-	1	1	2
D.C.	-	-	54	32	11	29	U	-	U	-	-	1
Va.	16	13	195	211	92	116	-	-	-	2	2	1
W. Va.	5	4	7	11	8	16	-	-	-	-	-	-
N.C.	24	21	115	187	215	235	-	-	-	-	-	2
S.C.	3	4	38	98	42	90	-	-	-	-	-	1
Ga.	45	31	603	559	128	126	-	1	-	1	2	1
Fla.	35	23	506	539	398	341	-	2	-	-	2	6
E.S. CENTRAL	53	54	340	567	365	659	-	-	-	2	2	1
Ky.	7	8	22	68	41	36	-	-	-	-	-	-
Tenn.	31	30	207	344	255	411	-	-	-	1	1	-
Ala.	13	14	68	78	67	72	-	-	-	1	1	1
Miss.	2	2	43	77	2	140	-	-	-	-	-	-
W.S. CENTRAL	54	47	3,756	5,274	1,133	1,179	-	1	-	-	1	8
Ark.	-	2	89	196	87	79	-	-	-	-	-	-
La.	23	12	108	214	154	158	-	1	-	-	1	-
Okla.	28	30	552	1,326	92	47	-	-	-	-	-	1
Tex.	3	3	3,007	3,538	800	895	-	-	-	-	-	7
MOUNTAIN	106	79	2,968	3,906	761	791	-	3	-	2	5	8
Mont.	-	-	93	68	5	12	-	-	-	-	-	-
Idaho	1	1	227	125	42	50	-	-	-	-	-	-
Wyo.	1	4	36	31	8	24	-	-	-	-	-	-
Colo.	18	18	319	377	105	134	-	-	-	-	-	-
N. Mex.	7	6	137	324	295	235	-	-	-	-	-	-
Ariz.	54	29	1,789	2,058	166	183	-	-	-	2	5	5
Utah	6	3	183	521	66	84	-	-	-	-	-	1
Nev.	19	16	204	402	74	69	-	-	-	-	-	2
PACIFIC	102	228	4,688	6,927	1,540	1,652	-	32	-	5	37	26
Wash.	10	5	884	595	111	73	-	-	-	1	1	2
Oreg.	37	32	355	344	114	108	-	-	-	-	-	-
Calif.	47	175	3,595	5,812	1,297	1,447	-	5	-	3	8	20
Alaska	1	8	18	33	12	14	-	27	-	1	28	-
Hawaii	7	8	36	143	6	10	-	-	-	-	-	4
Guam	-	-	-	-	-	-	-	-	-	-	-	-
P.R.	2	-	49	259	333	748	U	-	U	-	-	-
V.I.	U	U	U	U	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	6	3	1	53	44	U	-	U	-	-	1

N: Not notifiable U: Unavailable - : no reported cases

*Of 216 cases among children aged <5 years, serotype was reported for 106 and of those, 42 were type b.

†For imported measles, cases include only those resulting from importation from other countries.

TABLE III. (Cont'd.) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending November 28, 1998, and November 22, 1997 (47th Week)

Reporting Area	Meningococcal Disease		Mumps			Pertussis			Rubella		
	Cum. 1998	Cum. 1997	1998	Cum. 1998	Cum. 1997	1998	Cum. 1998	Cum. 1997	1998	Cum. 1998	Cum. 1997
UNITED STATES	2,375	2,888	5	434	586	71	5,526	5,056	-	328	158
NEW ENGLAND	100	181	-	7	12	7	850	922	-	38	1
Maine	6	17	-	-	-	-	5	19	-	-	-
N.H.	4	14	-	-	1	3	112	127	-	-	-
Vt.	5	4	-	-	-	2	71	235	-	-	-
Mass.	52	89	-	4	4	-	608	489	-	8	1
R.I.	9	20	-	1	6	-	9	15	-	1	-
Conn.	25	37	-	2	1	2	45	26	-	29	-
MID. ATLANTIC	226	316	2	31	55	8	526	372	-	130	34
Upstate N.Y.	65	83	2	8	11	8	290	152	-	111	6
N.Y. City	23	51	-	4	3	-	23	80	-	14	28
N.J.	54	67	-	2	8	-	8	13	-	4	-
Pa.	84	115	-	17	33	-	208	147	-	1	-
E.N. CENTRAL	353	441	1	72	80	6	591	555	-	-	6
Ohio	131	152	1	28	31	3	264	151	-	-	-
Ind.	63	51	-	6	12	-	140	55	-	-	-
Ill.	86	136	-	11	11	3	105	93	-	-	2
Mich.	41	65	-	27	22	-	65	55	-	-	-
Wis.	32	37	-	-	4	-	17	201	-	-	4
W.N. CENTRAL	197	211	-	30	17	14	515	488	-	33	-
Minn.	31	34	-	13	6	14	320	268	-	-	-
Iowa	40	44	U	11	9	U	68	92	U	-	-
Mo.	70	90	-	3	-	-	32	66	-	2	-
N. Dak.	5	2	-	2	-	-	3	1	-	-	-
S. Dak.	7	5	-	-	-	-	8	5	-	-	-
Nebr.	14	15	-	-	1	-	18	10	-	-	-
Kans.	30	21	-	1	1	-	66	26	-	31	-
S. ATLANTIC	421	494	-	48	71	1	309	403	-	19	78
Del.	2	5	-	-	-	-	5	-	-	-	-
Md.	29	42	-	-	1	-	54	112	-	1	-
D.C.	1	12	U	-	-	U	1	3	U	-	1
Va.	43	58	-	8	18	-	36	51	-	1	1
W. Va.	16	18	-	-	-	-	2	6	-	-	-
N.C.	56	87	-	11	10	-	98	115	-	13	59
S.C.	55	52	-	7	11	-	27	28	-	-	15
Ga.	92	94	-	1	10	-	27	13	-	-	-
Fla.	127	126	-	21	21	1	59	74	-	4	2
E.S. CENTRAL	221	218	-	14	31	1	117	136	-	2	1
Ky.	34	45	-	-	3	-	50	61	-	-	-
Tenn.	70	75	-	1	6	1	36	36	-	2	-
Ala.	93	73	-	8	9	-	28	28	-	-	1
Miss.	24	25	-	5	13	-	3	11	-	-	-
W.S. CENTRAL	273	274	-	59	81	-	351	269	-	87	4
Ark.	30	32	-	12	1	-	91	51	-	-	-
La.	58	48	-	10	14	-	9	19	-	-	-
Okl.	40	39	-	-	-	-	30	51	-	-	-
Tex.	145	155	-	37	66	-	221	148	-	87	4
MOUNTAIN	141	166	1	38	54	22	1,069	1,079	-	5	7
Mont.	4	8	-	-	-	-	12	18	-	-	-
Idaho	11	10	-	5	3	5	249	518	-	-	2
Wyo.	7	3	-	1	1	-	8	7	-	-	-
Colo.	30	44	-	6	3	1	220	342	-	-	-
N. Mex.	25	29	N	N	N	-	94	115	-	1	-
Ariz.	41	39	-	6	32	-	199	35	-	1	5
Utah	14	15	1	6	8	16	240	20	-	2	-
Nev.	9	18	-	14	7	-	47	24	-	1	-
PACIFIC	443	587	1	135	185	12	1,198	852	-	14	27
Wash.	59	83	1	11	19	3	308	362	-	9	5
Oreg.	82	114	N	N	N	1	87	46	-	-	-
Calif.	294	380	-	99	133	8	774	410	-	3	14
Alaska	3	3	-	2	8	-	14	16	-	-	-
Hawaii	5	7	-	23	25	-	15	18	-	2	8
Guam	1	1	U	2	1	U	-	-	U	-	-
P.R.	6	8	-	1	7	-	6	-	-	-	-
V.I.	U	U	U	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	-	U	2	4	U	1	-	U	-	-

N: Not notifiable

U: Unavailable

-: no reported cases

TABLE IV. Deaths in 122 U.S. cities,* week ending November 28, 1998 (47th Week)

Reporting Area	All Causes, By Age (Years)						P&I [†] Total	Reporting Area	All Causes, By Age (Years)						P&I [†] Total	
	All Ages	>65	45-64	25-44	1-24	<1			All Ages	>65	45-64	25-44	1-24	<1		
NEW ENGLAND	518	385	85	29	10	9	38	S. ATLANTIC	1,004	677	193	86	20	26	48	
Boston, Mass.	145	103	28	10	2	2	13	Atlanta, Ga.	26	13	8	3	1	1	-	
Bridgeport, Conn.	42	33	7	1	-	1	6	Baltimore, Md.	184	116	36	19	7	6	19	
Cambridge, Mass.	10	9	1	-	-	-	-	Charlotte, N.C.	57	38	12	5	1	1	5	
Fall River, Mass.	17	16	1	-	-	-	-	Jacksonville, Fla.	101	74	14	6	-	5	1	
Hartford, Conn.	41	28	7	1	3	2	1	Miami, Fla.	111	80	21	9	1	-	1	
Lowell, Mass.	19	15	2	2	-	-	3	Norfolk, Va.	34	23	7	1	-	3	3	
Lynn, Mass.	2	2	-	-	-	-	-	Richmond, Va.	40	29	8	3	-	-	-	
New Bedford, Mass.	16	13	1	1	1	-	-	Savannah, Ga.	45	37	3	4	-	1	2	
New Haven, Conn.	34	22	7	4	1	-	2	St. Petersburg, Fla.	37	33	3	1	-	-	2	
Providence, R.I.	57	41	9	5	-	2	5	Tampa, Fla.	192	138	36	10	2	6	9	
Somerville, Mass.	5	2	2	1	-	-	-	Washington, D.C.	168	89	43	25	8	3	4	
Springfield, Mass.	31	24	5	1	1	-	2	Wilmington, Del.	9	7	2	-	-	-	-	
Waterbury, Conn.	32	25	4	2	-	1	1	E.S. CENTRAL	802	517	151	71	26	33	37	
Worcester, Mass.	67	52	11	1	2	1	5	Birmingham, Ala.	199	130	33	22	5	5	12	
MID. ATLANTIC	2,356	1,702	431	148	35	40	111	Chattanooga, Tenn.	69	42	19	3	3	2	4	
Albany, N.Y.	37	24	7	5	1	-	1	Knoxville, Tenn.	73	51	10	7	2	3	3	
Allentown, Pa.	22	19	3	-	-	-	-	Lexington, Ky.	49	33	10	2	2	2	4	
Buffalo, N.Y.	94	68	15	8	1	2	5	Memphis, Tenn.	232	155	48	9	6	14	11	
Camden, N.J.	23	13	6	-	-	4	4	Mobile, Ala.	47	35	4	5	1	2	-	
Elizabeth, N.J.	6	5	1	-	-	-	-	Montgomery, Ala.	27	17	4	4	1	1	1	
Erie, Pa.	31	25	5	-	-	1	3	Nashville, Tenn.	106	54	23	19	6	4	2	
Jersey City, N.J.	17	10	2	2	1	2	-	W.S. CENTRAL	1,067	703	227	87	22	28	72	
New York City, N.Y.	1,511	1,063	302	102	23	21	64	Austin, Tex.	50	29	11	4	2	4	5	
Newark, N.J.	U	U	U	U	U	U	U	Baton Rouge, La.	38	21	8	6	3	-	-	
Paterson, N.J.	16	9	5	1	-	1	-	Corpus Christi, Tex.	47	35	11	1	-	-	1	
Philadelphia, Pa.	300	225	43	21	6	5	13	Dallas, Tex.	116	60	27	16	4	9	4	
Pittsburgh, Pa.	53	42	8	2	-	1	6	El Paso, Tex.	55	30	13	8	1	3	1	
Reading, Pa.	26	23	3	-	-	-	3	Ft. Worth, Tex.	50	35	11	3	-	1	7	
Rochester, N.Y.	80	52	12	3	1	2	6	Houston, Tex.	343	232	67	36	5	3	28	
Schenectady, N.Y.	23	20	3	-	-	-	3	Little Rock, Ark.	46	34	10	2	-	-	4	
Scranton, Pa.	26	24	1	1	-	-	-	New Orleans, La.	27	14	9	1	2	1	-	
Syracuse, N.Y.	41	31	7	1	1	1	1	San Antonio, Tex.	136	103	25	3	2	3	11	
Trenton, N.J.	24	18	4	1	1	-	2	Shreveport, La.	73	45	20	6	-	2	4	
Utica, N.Y.	26	21	4	1	-	-	-	Tulsa, Okla.	86	65	15	1	3	2	7	
Yonkers, N.Y.	U	U	U	U	U	U	U	MOUNTAIN	787	563	131	56	20	16	59	
E.N. CENTRAL	1,800	1,227	337	137	41	53	111	Albuquerque, N.M.	59	49	7	3	-	-	3	
Akron, Ohio	34	19	8	3	1	3	-	Boise, Idaho	32	26	5	1	-	-	3	
Canton, Ohio	34	28	6	-	-	-	5	Bozeman, Mont.	54	39	12	1	1	1	2	
Chicago, Ill.	461	284	94	44	13	21	24	Colo. Springs, Colo.	103	69	19	6	2	7	6	
Cincinnati, Ohio	119	87	13	7	4	8	10	Denver, Colo.	188	133	39	13	3	-	11	
Cleveland, Ohio	143	91	31	14	4	3	2	Las Vegas, Nev.	188	133	39	13	3	-	11	
Columbus, Ohio	162	112	32	14	2	2	16	Ogden, Utah	14	12	-	2	-	-	2	
Dayton, Ohio	78	58	15	3	2	-	5	Phoenix, Ariz.	126	78	15	18	8	6	10	
Detroit, Mich.	120	66	28	20	4	2	8	Pueblo, Colo.	16	14	1	1	-	-	4	
Evansville, Ind.	20	17	3	-	-	-	-	Salt Lake City, Utah	80	57	13	4	4	2	7	
Fort Wayne, Ind.	69	54	10	3	-	2	2	Tucson, Ariz.	115	86	20	7	2	-	11	
Gary, Ind.	3	1	1	1	-	-	-	PACIFIC	1,106	778	205	80	17	24	113	
Grand Rapids, Mich.	62	42	11	4	2	3	7	Berkeley, Calif.	11	6	2	3	-	-	-	
Indianapolis, Ind.	125	82	27	10	3	3	5	Fresno, Calif.	99	74	16	8	-	1	15	
Lansing, Mich.	27	23	2	2	-	-	1	Glendale, Calif.	4	3	1	-	-	-	1	
Milwaukee, Wis.	91	61	21	5	2	2	13	Honolulu, Hawaii	60	45	9	2	1	2	5	
Peoria, Ill.	46	34	10	-	1	1	5	Long Beach, Calif.	74	57	15	1	-	1	9	
Rockford, Ill.	39	30	6	2	1	-	2	Los Angeles, Calif.	27	19	5	2	-	1	2	
South Bend, Ind.	39	35	2	2	-	-	2	Pasadena, Calif.	19	13	5	1	-	-	2	
Toledo, Ohio	75	63	9	1	-	2	2	Portland, Oreg.	229	157	44	21	6	1	18	
Youngstown, Ohio	53	40	8	2	2	1	2	Sacramento, Calif.	192	133	41	11	1	6	26	
W.N. CENTRAL	617	439	113	35	7	12	29	San Diego, Calif.	96	67	18	5	4	2	12	
Des Moines, Iowa	119	79	32	3	-	5	9	San Francisco, Calif.	94	64	17	10	-	2	14	
Duluth, Minn.	U	U	U	U	U	U	U	San Jose, Calif.	U	U	U	U	U	U	U	
Kansas City, Kans.	15	9	3	2	1	-	-	Santa Cruz, Calif.	20	12	6	3	-	-	1	
Kansas City, Mo.	109	75	12	7	3	1	3	Seattle, Wash.	63	43	10	5	3	2	2	
Lincoln, Neb.	17	12	4	1	-	-	-	Spokane, Wash.	43	35	1	3	2	2	3	
Minneapolis, Minn.	116	87	17	10	1	1	8	Tacoma, Wash.	75	50	16	5	-	4	3	
Omaha, Neb.	54	39	12	-	2	1	5	TOTAL	10,057 [†]	6,901	1,873	729	198	241	618	
St. Louis, Mo.	73	49	17	6	-	1	-									
St. Paul, Minn.	65	49	9	5	-	2	4									
Wichita, Kans.	49	40	7	1	-	1	-									

U: Unavailable -> no reported cases

*Mortality data in this table are voluntarily reported from 122 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fatal deaths are not included.

†Pneumonia and influenza.

‡Because of changes in reporting methods in this Pennsylvania city, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

§Total includes unknown ages.

Abortion Surveillance — Continued

vide, information about characteristics (e.g., age or race) of women obtaining legal abortions (two states). To track efforts to prevent unintended pregnancy, each state needs an accurate assessment of abortion on an ongoing basis (including the number and characteristics of women obtaining legal abortions). Since 1992, most reporting areas have reported abortions by gestational age in weeks of gestation for abortions performed at ≤ 8 weeks. As new medical methods are introduced and used for terminating pregnancies primarily at ≤ 8 weeks' gestation, these data will continue to assist in monitoring trends in legal abortions (8-10).

Additional statistical and epidemiologic information about legal induced abortions is available from CDC's automated Reproductive Health Information line, telephone (888) 232-2306, which provides information by fax, by voice recordings, or through the mail; or from CDC's World-Wide Web site, <http://www.cdc.gov>.

References

1. Koonin LM, Smith JC, Ramick M, Strauss LT. Abortion surveillance: United States, 1995. *MMWR* 1998;47(no. SS-2):31-68.
2. Ventura SJ, Martin JA, Curtin SC, Mathews TJ. Report of final natality statistics, 1996. Hyattsville, Maryland: US Department of Health and Human Services, Public Health Service, CDC, 1998; DHHS publication no.(PHS)98-1120. (Monthly vital statistics report; vol 46, no. 11, suppl 2).
3. CDC. Abortion surveillance—1975. Atlanta, Georgia: US Department of Health and Human Services, Public Health Service, CDC, 1977.
4. CDC. Abortion surveillance—1976. Atlanta, Georgia: US Department of Health and Human Services, Public Health Service, CDC, 1978.
5. Abma J, Chandra A, Mosher W, Peterson L, Piccinino L. Fertility, family planning, and women's health: new data from the 1995 National Survey of Family Growth. *Vital Health Stat* 1997;23:1-114.
6. Henshaw SK. The accessibility of abortion services in the United States. *Fam Plann Perspect* 1991;23:246-52,263.
7. Henshaw SK, VanVort J. Abortion services in the United States, 1991 and 1992. *Fam Plann Perspect* 1994;26:100-6,112.
8. Peyron R, Aubeny E, Targosz V, et al. Early termination of pregnancy with mifepristone (RU 486) and the orally active prostaglandin misoprostol. *N Engl J Med* 1993;328:1509-13.
9. Creinin MD, Vittinghoff E, Galbraith S, Klaissle C. A randomized trial comparing misoprostol three and seven days after methotrexate for early abortion. *Am J Obstet Gynecol* 1995;173:1578-84.
10. Population Council. U.S. mifepristone clinical trials: summary of findings. New York, New York: Population Council, 1997.

**Contributors to the Production of the MMWR (Weekly)
Weekly Notifiable Disease Morbidity Data and 122 Cities Mortality Data**

Samuel L. Groseclose, D.V.M., M.P.H.

State Support Team

Robert Fagan
Gerald Jones
Carol A. Worsham

CDC Operations Team

Carol M. Knowles
Deborah A. Adams
Willie J. Anderson
Patsy A. Hall
Amy K. Henion
Myra A. Montalbano

The *Morbidity and Mortality Weekly Report (MMWR)* Series is prepared by the Centers for Disease Control and Prevention (CDC) and is available free of charge in electronic format and on a paid subscription basis for paper copy. To receive an electronic copy on Friday of each week, send an e-mail message to listserv@listserv.cdc.gov. The body content should read *SUBscribe mmwr-toc*. Electronic copy also is available from CDC's World-Wide Web server at <http://www.cdc.gov/> or from CDC's file transfer protocol server at <ftp.cdc.gov>. To subscribe for paper copy, contact Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; telephone (202) 512-1800.

Data in the weekly *MMWR* are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the following Friday. Address inquiries about the *MMWR* Series, including material to be considered for publication, to: Editor, *MMWR* Series, Mailstop C-08, CDC, 1600 Clifton Rd., N.E., Atlanta, GA 30333; telephone (888) 232-3228.

All material in the *MMWR* Series is in the public domain and may be used and reprinted without permission; citation as to source, however, is appreciated.

Director, Centers for Disease Control
and Prevention
Jeffrey P. Koplan, M.D., M.P.H.
Deputy Director, Centers for Disease
Control and Prevention
Claire V. Broome, M.D.

Director, Epidemiology Program Office
Stephen B. Thacker, M.D., M.Sc.
Editor, *MMWR* Series
John W. Ward, M.D.
Managing Editor,
MMWR (weekly)
Karen L. Foster, M.A.

Writers-Editors,
MMWR (weekly)
David C. Johnson
Teresa F. Rutledge
Caran R. Wilbanks
Desktop Publishing and
Graphics Support
Morie M. Higgins
Peter M. Jenkins

☆U.S. Government Printing Office: 1998-733-228/87047 Region IV

DEPARTMENT OF
HEALTH AND HUMAN SERVICES
Centers for Disease Control
and Prevention (CDC)
Atlanta, Georgia 30333

Official Business
Penalty for Private Use \$300
Return Service Requested

9602 93036 M10014
UNIVERSITY MICROFILMS
SERIALS ACQUISITION DEPT
300 NORTH ZEEB ROAD
ANN ARBOR MI 48103-1553

0001

FIRST-CLASS MAIL
POSTAGE & FEES PAID
PHS/CDC
Permit No. G-284

